



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,016	04/13/2004	Alain Hassan	VA30454	3538

226 7590 09/20/2005

ALSTOM POWER INC.
INTELLECTUAL PROPERTY LAW DEPT.
P.O. BOX 500
WINDSOR, CT 06095

EXAMINER

NGUYEN, NINH H

ART UNIT	PAPER NUMBER
----------	--------------

3745

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/823,016

Applicant(s)

HASSAN, ALAIN

Examiner

Ninh H. Nguyen

Art Unit

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- Paper No(s)/Mail Date 05/20/04.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR

1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the high-pressure module embodies the shape of a converging-diverging nozzle as recited in claim 4; and "the single stages of blades of the high-pressure module embody a profile includes channels that converge and then diverge in the direction from the inlet to the outlet thereof" as recited in claim 3 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the

Art Unit: 3745

drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following:

Page 1, line 31- page 2, line 4 discusses the features of the stationary blades of the invention. However, on line 2 of page, within the same paragraph, the inventor abruptly switches to "Each such moving blade". In addition, claim 3 recites the single stage of blades of the high-pressure module "embody a profile includes channels that converge and then diverge in the direction from the inlet to the outlet thereof". This indicates that converging-diverging profile of a moving blade is also a feature of the invention. However, the specification does not positively disclose this feature of the invention. Therefore, the specification is objected to because it is unclear whether a portion of the specification discussing the converging-diverging profile of the moving blades is missing or it is just an editorial error, and the phrase "Each such moving blade" should read "Each such stationary blade". Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 3745

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for lack of antecedent basis for the limitation of the single stages of blades of the high-pressure module embody a profile includes channels that converge and then diverge in the direction from the inlet to the outlet.

NOTE: in light of the objection to the specification above, it is assumed that it's the stationary blade that has a converging-diverging profile in the rejection below.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 4-6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al. (5,274,997) in view of Hoffman (3,185,854).

Inoue discloses a turbine (Fig. 1) comprising a high-pressure module having a rotor 27 and a single stage of blades, a low pressure module 38, and a speed-reducing gearbox, wherein the high-pressure module has a one-piece nozzle 32;

wherein the high-pressure module embodies the shape of a converging-diverging nozzle (Fig. 1);

wherein the nozzle is inherently a multi-channel nozzle ;

Art Unit: 3745

wherein the high-pressure module includes a moving wheel 27 that is constrained to rotate with a shaft 18 and supports the blades and wherein the moving wheel and the shaft comprise a one-piece unit (Fig. 1); and

wherein the high-pressure module is provided with an independent bearing 16.

However, Inoue does not disclose a generator as claimed.

Hoffman teaches a turbine generator (Fig. 1) comprising a turbine 3 having a shaft connected to a gear box 2 and the output shaft of the gearbox is connected to a generator 1.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made, to make the turbine of Inoue with a generator, such as the one taught by Hoffman, for the purpose of generating electricity as commonly done in the art.

8. Claims 1-3, 6-8, and 10, as far as they are definite, are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (Fig. 1) in view of Theis, Jr. (4,150,918).

Applicant's admitted prior art discloses a turbine (Fig. 1 of the specification) comprising a high pressure module, a low-pressure module, a speed-reducing gearbox, and an alternator;

wherein each of the high-pressure module and of low-pressure module includes a rotor and wherein the rotor of the high-pressure module and the rotor of the low-pressure module is driven by the speed-reducing gearbox;

wherein the high-pressure module includes a moving wheel that is constrained to rotate with a shaft and the supports the blades and wherein the moving wheel and the shaft comprise a one-piece unit;

wherein the shaft of the turbine is directly connected to the speed-reducing gearbox.

Art Unit: 3745

However, Applicant's admitted prior art does not disclose the high-pressure module consisting of a single stage of blades, wherein the high-pressure module has a one-piece nozzle as claimed.

Theis teaches a steam turbine (Figs. 1-6) comprises a single stage of blades 45, a one piece, and a multi-channel nozzle plate 29 having a plurality of converging-diverging nozzle 30 (Fig. 6).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made, to make the turbine of Applicant's admitted prior art with the steam turbine of Theis for the purpose of providing high efficiency turbine as taught by Theis (col. 6, lines 1-50; col. 8, lines 48-52).

Allowable Subject Matter

9. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior Art

The prior art made of record but not relied upon is considered pertinent to applicant's disclosure and consists of 2 patents.

Ostermann et al. (4,189,813) and Shohre (3,804,335) are cited to show turbines having a single stage of blade and a turbine having a converging-diverging nozzle, respectively.

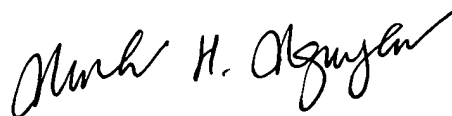
Art Unit: 3745

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Ninh Nguyen whose telephone number is (571) 272-4823. The examiner can be normally reached on Monday-Friday from 7:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached at (571) 272-4820. The fax number for this group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, please go to <http://pair-direct.uspto.gov> or contact the Electronic Business center (EBC) at 866-217-9197 (toll-free).



**NINH H. NGUYEN
PRIMARY EXAMINER**

Nhn
September 12, 2005